World Health Organization's Mental Health Atlas 2005: implications for policy development

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In 2005, the World Health Organization (WHO) launched the second edition of the Mental Health Atlas, consisting of revised and updated information on mental health from countries. The sources of information included the mental health focal points in the Ministries of Health, published literature and unpublished reports available to WHO. The results show that global mental health resources remain low and grossly inadequate to respond to the high level of need. In addition, the revised Atlas shows that the improvements over the period 2001 to 2004 are very small. Imbalances across income groups of countries remain largely the same. Enhancement in resources devoted to mental health is urgently needed, especially in low- and middle-income countries.

Key words: Mental health, mental health policy, mental health services, inequities, human resources, developing countries, mental health indicators

Reliable information on mental health resources and services is essential to enhance attention to mental health needs, to measure inequities, to identify priorities and to plan mental health services, if the low priority accorded to mental health in overall health is to change (1). Such information is urgently needed, because mental disorders are highly prevalent and cause considerable suffering and disease burden.

In 2000, the World Health Organization (WHO) initiated the Mental Health Atlas project, to fill the gap in global information on mental health resources and services (2). The objectives of this project included collection, compilation and dissemination of global information about mental health resources and services in each country (3-6).

In 2005, the WHO launched the second edition of the Atlas (7), consisting of revised and updated information from countries. Information related to policy, programmes, financing and mental health resource indicators (beds, personnel, services for special populations and availability of drugs) was sought from the Ministry of Health of each country. Triangulation of data was achieved through an exhaustive literature search on mental health resources in low- and middle-income countries on Medline and Embase Psychiatry and from documents received from countries, travel reports submitted by WHO staff, country data collected by WHO Regional Offices, and feedback from experts and Member Societies of the WPA. Finally, all information was verified by the focal points for mental health in the Ministries of Health.

All the 192 WHO Member States and 11 Associate Members, Areas and Territories are covered by Mental Health Atlas 2005. This represents approximately 99% of the world's population. Some limitations should be kept in mind when viewing the findings of Atlas 2005. While best attempts have been made to obtain information from countries on all variables, some could not provide specific details on a few issues. Common reasons for missing data are that some of these data simply do not exist within the countries or accurate national figures are unobtainable under the decentralized organization of many countries.

The present report looks into the pattern of findings from the perspective of income groups of countries according to the World Bank. The 197 WHO Member States and Associate Members, Areas and Territories that are listed by the World Bank form the universe for the report.

THE CURRENT SITUATION

Mental health policy and legislation

As shown in Table 1, specific policies on mental health are present in 63.1% of countries. A mental health policy is present in 50.8%, 69.1%, 65.7%, and 70.5% of low-income, lower middle-income, upper middle-income and high-income countries, respectively. Clearly, the low-income countries are lagging behind. Most countries that reported having a policy also had all the essential components incorporated into it, such as treatment issues, prevention, rehabilitation, promotion and advocacy. About 78% of countries have legislation in the field of mental health, though there are larger disparities between the income groups of countries, with 92.7% of high-income countries having specific mental health legislation, and 69.2% and 74% of lower middle-income and low-income countries having such legislation. The presence of substance abuse policies showed a still greater disparity, with 55% of low-income and 86.4% of high-income countries reporting their presence. Similarly, provisions for disability benefits for the mentally ill had been made in only 55.2% of low-income in comparison to all high-income countries.

The majority of policies and legislations on mental health are relatively recent. Almost 63%, 57% and 62% of the countries have developed their mental health policy, enacted their existing legislation, and developed their substance abuse policy since the 1990s. However, 14% of the

Table 1 Policies, services and resources for mental health in different countries by income groups (according to the World Bank)

	Low	Lower-Middle	Upper-Middle	High	Total
Policies and legislation					
Mental health policy (N=195) (%)	50.8	69.1	65.7	70.5	63.1
Mental health legislation (N=173) (%)	74.0	69.2	81.3	92.7	78.3
Substance abuse policy (N=194) (%)	55.0	74.1	72.2	86.4	70.6
Disability benefits (N=190) (%)	55.2	87.0	80.0	100	78.9
Budget and financing					
Specified budget for mental health (N=190) (%)	70.2	63.6	77.1	74.4	70.5
Mental health budget as percentage of health budget (N=101) (median)	1.0	2.1	3.0	6.8	2.5
Most common method of financing mental health care (N=186) (%)					
- Tax based	15.1	19.9	12.4	15.6	63.0
- Out-of-pocket payment	12.9	4.3	0	0	17.2
- Social insurance	0	2.2	5.9	7.0	15.1
Community and primary care					
Community care for mental health (N=189) (%)	51.7	52.8	88.6	93.0	68.3
Mental health in primary care (N=194) (%)	76.3	87.3	100	93.2	87.6
Facilities for management of severe mental disorders in primary care (N=192) (%)	55.2	45.5	71.4	79.5	60.9
Training for primary care personnel (N=191) (%)	60.3	60.0	52.8	61.9	59.2
Beds per 10,000 population					
All psychiatric beds (N=190) (median)	0.2	1.6	7.5	7.0	1.7
Mental hospital beds (N=182) (median)	0.2	1.4	4.8	4.3	1.0
General hospital beds (N=178) (median)	0.04	0.1	0.6	1.2	0.2
Mental health professionals per 100,000 population					
Psychiatrists (N=187) (median)	0.1	1.0	2.7	9.2	1.5
Psychiatric nurses (N=176) (median)	0.2	1.1	5.3	31.8	2.2
Psychologists (N=177) (median)	0.04	0.6	1.8	11.0	0.7
Social workers (N=168) (median)	0	0	2.0	18.0	0
Mental health programmes for special populations					
Children (N=186) (%)	34.5	74.1	74.3	86.4	64.9
Elderly (N=184) (%)	17.9	51.9	65.7	81.8	51.3
Minority (N=187) (%)	5.3	13.0	12.1	37.2	16.0
Indigenous (N=187) (%)	7.0	20.4	18.2	20.9	16.0
Monitoring systems for mental health services					
Reporting system (N=190) (%)	62.1	81.8	82.9	81.0	75.8

legislations (half of these in low-income countries) date from before 1960, when many of the current effective methods for treating mental disorders were not yet available and the human rights environment was still developing.

Mental health budget and financing

In spite of the importance of a specific mental health budget within the total health budget, about 30% of the countries reported not having a specified budget for mental health care. Of the 101 countries that reported their mental health budget, 25% spend less than 1% of the total health budget on mental health. The median figures for percentage of health budget spent on mental health in low-income, lower middle-income, upper middle-income, and high-income countries, respectively, are 1%, 2.1%, 3%, and 6.8%. About 47%, 30%, 9%, and 5% of low-income, lower middle-income, upper middle-income, and high-income countries, respectively, spend less than 1% of their health budget on mental health care (Figure 1). On the contrary, more than three-fourths of high-income countries, in comparison to about one-third of upper middle-income and one-fifth of low-income and lower middle-income countries, spend more than 5% of their total health budget on mental health. There is a clear need to increase the resource allocation to mental health care in several countries. This should be eminently feasible in the middle- and high-income countries.

Examination of the percentage of total health budget spent on mental health *versus* the Gross Domestic Product (GDP) shows that countries that have higher GDP tend to earmark higher percentages of their total health budget for mental health. A logarithmic trend line (Figure 2) confirms this relationship. This illustrates the double disadvantage suffered by mental health in low-income countries: they have, even proportionally, a lower mental health budget.

The tax based method is the preferred one for financing mental health care in 63% of countries. However, the quantum of care that is covered by the tax-based systems may vary across countries. Other methods include out-of-

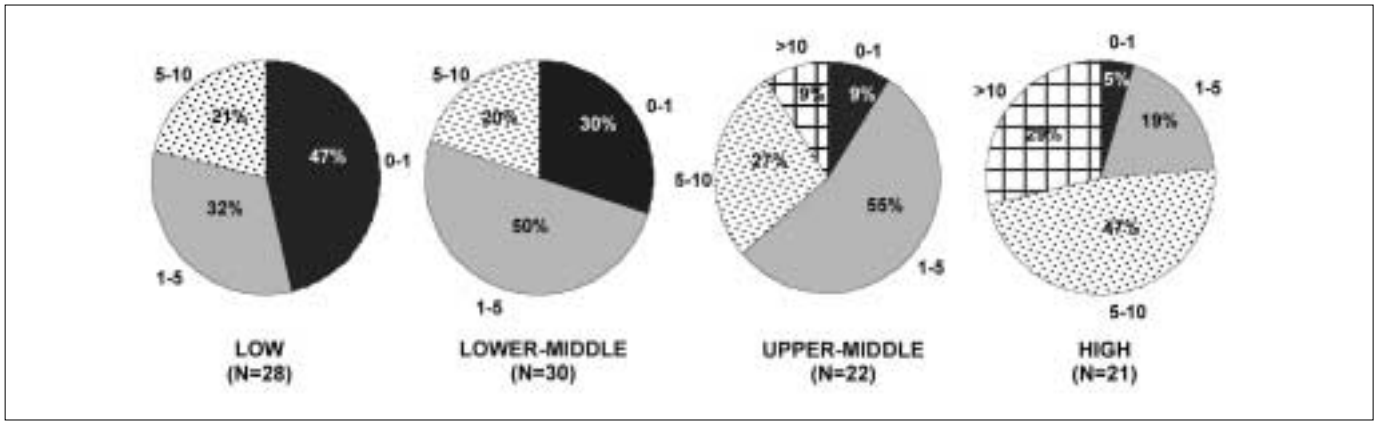

Figure 1 Percentage of total health budget spent on mental health in different income groups of countries (N=101).

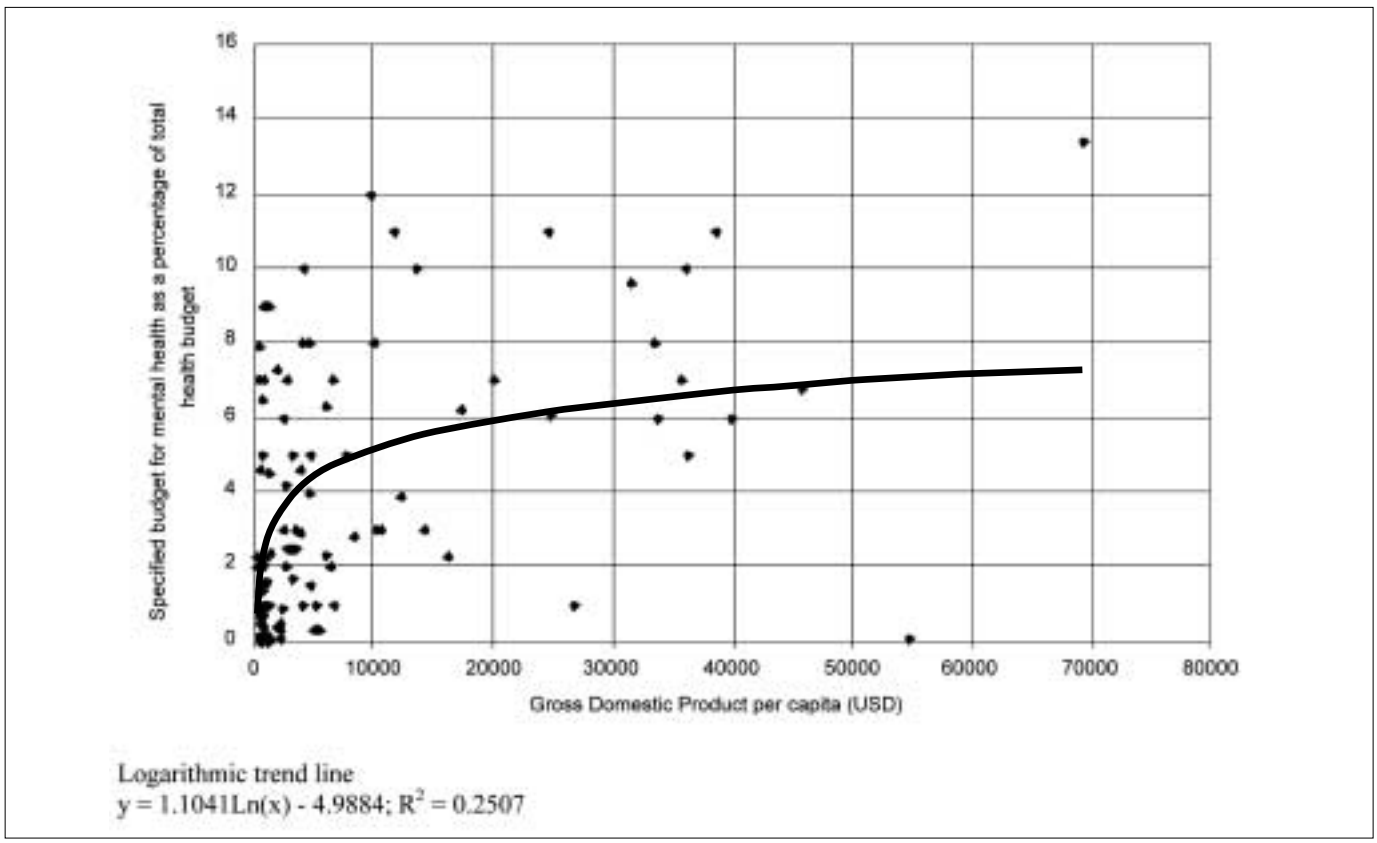

Figure 2 Specified mental health budget as a proportion of total health budget by Gross Domestic Product per capita (N=101).

pocket payment in 17.2%; social insurance in 15.1%; external grants in 3% and private insurance in 2% of countries. All countries with out-of-pocket payment as the dominant method of financing mental health care belong to low-income or lower middle-income categories. On the other hand, almost all countries with social insurance as the dominant method of financing mental health care belong to high-income or upper middle-income categories.

Out-of-pocket payment is unsatisfactory because severe mental disorders can lead to heavy financial expenditure. Mental health care should preferably be financed through taxes or social insurance. Private health insurance is also inequitable, because it favours the more affluent sections of society and is often more restrictive in the coverage of mental illness than in the coverage of somatic illness.

Community care for mental health

Globally, 68.3% of countries reported to have at least some community care facilities for mental health. These facilities are present only in 51.7% of the low-income coun-

tries versus 93% of high-income countries. However, the extent of coverage of the community care within the countries as well as its quality remains variable.

Further development of community-based services is necessary, because such services can lead to early intervention and limit the stigma of taking treatment. Community care also has a better effect than institutional treatment on the outcome and quality of life of individuals with chronic mental disorders. Shifting patients from mental hospitals to care in the community is cost-effective and respects human rights.

Mental health facilities at primary level of care

Mental health in primary care can be defined as the provision of basic preventive and curative mental health at the first level of the health care system. In many countries, a non-specialist who can refer complex cases to a more specialized mental health professional provides such care. Most mental disorders can be managed effectively at primary care level if adequate resources are made available. Shifting mental health care to primary level also helps to reduce stigma, improves early detection and treatment, leads to cost efficiency and savings, and partly offsets limitations of mental health resources through the use of community resources (1).

Mental health facilities at primary level are reported to be present in 87.6% of countries. However, only 60.9% of countries reported to actually provide treatment facilities for severe mental disorders at the primary care level. Only 45.5% and 55.2% of lower middle-income and low-income countries provide treatment facilities for severe mental disorders at the primary care level, in comparison to 79.5% of high-income countries. Half to three-fifths of countries across income groups provide training facilities for primary care personnel. This is obviously an area for concerted efforts all over the world.

Psychiatric beds

There are approximately 1.84 million psychiatric beds in the world, but in 39% of countries there is less than one psychiatric bed per 10,000 population. This is true for 85% of low-income and 36% of lower middle-income countries, in comparison to 11% of upper middle-income and 5% of high-income countries. The median number of beds per 10,000 population in low-, lower middle-, upper middle- and high-income countries is 0.2, 1.6, 7.5 and 7% respectively.

Globally, 72% of psychiatric beds are located in mental hospitals and the rest in other settings, including psychiatric units in general hospitals and community services. In low- and middle-income countries, 74% to 83% of psychiatric beds are located in mental hospitals, compared with 64% in high-income countries. The lower figures for high-income in comparison to low- and middle-income countries testifies to the trend towards deinstitutionalization in these countries.

Community care is the most appropriate set-up for treating patients with mental disorders. However, inpatient facilities are essential for managing patients with acute mental disorders. Efforts should be made to reduce the number of mental hospital beds and create more facilities in general hospitals and long-term community rehabilitation centres.

Human resources

The median number of psychiatrists per 100,000 population varies from 0.1 in low-income to 9.2 in high-income countries. Two-thirds of low-income and one-tenth of lower middle-income countries have less than 1 psychiatrist per 100,000 population, compared to none in upper middle-income and high-income countries.

The median number of psychiatric nurses per 100,000 population varies from 0.2 in low-income countries to 31.8 in high-income countries. Nearly 47% and 25% of low-income and lower middle-income countries have less than 1 psychiatric nurse per 100,000 population, compared to less than 3% of the upper middle-income and high-income countries.

The median number of psychologists in mental health per 100,000 population varies from 0.04 in low-income countries to 11% in high-income countries. Approximately 69%, 24%, and 11% of low-income, lower middle-income, and upper middle-income countries have less than 1 psychologist per 100,000 population, compared to none of the high-income countries.

The median number of social workers working in mental health per 100,000 population varies from 0 in low-income and lower middle-income countries to 18% in high-income countries. About 66% and 38% of low-income and lower middle-income countries have less than one social worker per 100,000 population, in comparison to less than 4% of upper middle-income and high-income countries.

It is obvious that there is a shortage in the number of mental health professionals in the world as a whole, and that there is also a wide variation between countries. Mental health professionals form the backbone of the mental health care delivery system. Their input is required not only in patient care but also in policy advice, administration and for training other personnel. Hence, manpower development is an urgent policy imperative.

Programmes for special populations

Programmes for special populations are those addressing the mental health concerns (including social integration) of the most vulnerable and disorder-prone groups of population. Programmes for indigenous people (16%) and minori-

ty groups (16%) were found in very few countries. Programmes for elderly persons were reported to be present in 51.3% and programmes for children in 64.9% of countries.

The gradient between low-income, middle-income and high-income countries in provision of services for special populations is marked. Even in countries where programmes for vulnerable populations exist, they are neither uniform in quality nor do they provide comprehensive coverage. Most low- and middle-income countries only have programmes available in a few specialized centres or areas. There is an urgent need to enhance attention to the mental health needs of vulnerable populations and to reduce inequities in mental health services.

Mental health information systems

Across the world, annual mental health reporting systems exist in 75.8% of countries, though their quality and coverage vary enormously. About three-fifths of low-income and four-fifths of middle- and high-income countries reported that they had these systems.

There is a need to improve the monitoring of mental health of communities, by including indicators of numbers of individuals with mental disorders and the quality of their care, as well as more general measures of mental health, in health information and reporting systems of countries. Monitoring can help in assessing the effectiveness of mental health prevention and treatment programmes, and it also strengthens arguments for the provision of more resources.

PROGRESS FROM 2001 TO 2004

A comparison of data collected in the year 2001 and in 2004 seems appropriate and necessary to assess changes over time. Some changes in data occurred because the method of data collection improved. Many countries responded to queries in 2004 that they had been unable to answer previously and a new Member State was added.

Overall, there was a marginal increase in number of countries with mental health policies and mental health legislation. More countries were providing disability benefits in some form.

A worrisome trend was observed in financing of mental health care. A decrease in emphasis on social insurance (-8.9%) and an increase in emphasis on private insurance (+8%) were observed in lower middle-income countries, and a decrease in emphasis on social insurance (-8.3%) occurred in high-income countries.

More countries were providing community mental health services than before. This change was most marked in upper middle-income countries (+13.8%). An increase (+6%) was noted in terms of availability of mental health services in primary care in upper middle-income countries.

There was a decrease in median number of beds per 10,000 population in high-income countries (-1.2 per 10,000 population) and an increase in middle-income countries, specially upper middle-income countries (+2.3 per 10,000 population). There was a decrease in proportion of mental hospital beds in comparison to all psychiatric beds (-11.7%) in low-income countries. Also, a global trend towards an increase (+3.9%) in proportion of general hospital psychiatric beds to total psychiatric beds was observed.

Globally, there was an increase in the number of mental health professionals. The greatest increase was noted in the number of psychologists engaged in mental health care (median: +0.2 per 100,000 population), especially in upper middle-income countries (+1.10), and in the number of social workers engaged in mental health care (median: +0.1 per 100,000 population). There was an increase in the median number of psychiatrists per 100,000 population in high-income countries (+1.5) and a global decrease in the number of countries with less than one psychiatrist (-5.1%) and psychologist (-6.7%) per 100,000 population. This trend was more marked in middle-income countries.

There was an increase in services for children and elderly in the lower middle-income (+13.3% and +5.6%, respectively) and upper middle-income (+7% and +9.6%, respectively) countries.

Regarding mental health reporting systems, an increase (+9.3%) in the number of countries with such systems was noted in lower middle-income countries.

COMMENTS

It is clear that mental disorders cause considerable burden on individuals, families and societies and are of immense public health importance. Yet, they are under-recognized, under-treated and under-prioritized the world over, despite the fact that effective management options are available and psychiatric care provision does not require sophisticated technologies. The results of Mental Health Atlas 2005 demonstrate that the resources that the world spends on mental health are grossly inadequate in comparison to the needs. The infrastructural, financial and human resources available for mental health are a small fraction of what are needed even to provide basic care to the population.

Inequalities across the countries remain large, especially between low-income and high-income countries. The WHO has consistently argued for a substantial enhancement in resources invested in mental health (1,8). Mental Health Atlas 2005 data clearly show that this need persists unabated.

The Governments, as the ultimate stewards of mental health, need to assume the responsibility for ensuring that the complex activities required to improve mental health services and care are carried out. Mental health policy, programmes and legislation are necessary steps for significant and sustained action. These should be based on current knowledge and human rights considerations.

The Mental Health Atlas 2005 represents the result of WHO's massive effort to provide information on mental health resources and services for advocacy, planning and monitoring change over time. The high volume of hits and downloads on the Atlas website (www.who.int/mental_health/evidence/atlas/) reveals that it has been able to fill a real need among the global mental health community. Overall, we hope that the data will assist health planners and policy-makers within countries to identify areas that need urgent attention. The country profiles can also help to set realistic targets by enabling comparisons across countries within similar income groups.

Countries should be assisted in the development of mental health policies. Old policies should be revised, bearing in mind the current situation of the country. Countries with limited resources should develop policies that will help them to achieve realistic goals and improve their mental health facilities. Countries without a policy can seek help by studying policies developed by other countries and by adapting them to their own needs. The WHO provides technical support to assist with the development of comprehensive mental health policies (9).

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Disclaimer

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